



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,385	03/03/2004	Norimasa Shigeta	Q80073	3523
23373	7590	12/18/2007	EXAMINER	
SUGHRUE MION, PLLC			WASHINGTON, JAMARES	
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037			2625	
			MAIL DATE	DELIVERY MODE
			12/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/791,385	SHIGETA, NORIMASA
	Examiner	Art Unit
	Jamares Washington	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 September 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendments and response received on September 28, 2007 have been entered. Claims 1-13 are currently pending. Claim 2 has been amended and claims 5-13 have been added by amendment. Amendments and response are addressed hereinbelow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, and 5-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahiro Fuchigami et al (US 6657746 B1).

Regarding claim 1, Fuchigami et al discloses a color conversion relation derivation method of deriving a color conversion relation between a first color space and a second color space (Col. 2 lines 35-40), the color conversion relation derivation method comprising:

an area forming step that forms a plurality of areas filling the first color space (Col. 2 line 66 through Col. 3 line 1);

a partial function derivation step that derives, for each of the areas formed in the area forming step, a partial function representative of a color conversion between coordinates in the area and coordinates of the second color space using a set of an arbitrary sample point provided in the first color space and a point in the second color space (Col. 3 lines 9-13), which is associated with the sample point ("...target lattice point..." as described at col. 3 line 13); and

a whole function derivation step that combines the partial functions for the respective areas derived by the partial function derivation step to derive a whole function representative of the color conversion relation through the first color space in its entirety (Col. 3 lines 14-19; Col. 1 lines 64-67).

Regarding claim 2, Fuchigami discloses the color conversion relation derivation method according to claim 1, wherein the area forming step forms, as the plurality of areas, a plurality of areas overlapping with one another (Col. 3 lines 6-9), and the whole function derivation step combines the partial functions in a range that the areas are overlapped with one another (Col. 8 lines 5-12).

Regarding claim 3, Fuchigami discloses a color conversion relation derivation apparatus for deriving a color conversion relation between a first color space and a second color space (Col. 3 lines 23-30), the color conversion relation derivation apparatus comprising:

an area forming section (Fig. 1 numerals 4-6) that forms a plurality of areas filling the first color space (Col. 3 lines 30-35);

a partial function derivation section (Fig. 1 numeral 7) that derives, for each of the areas formed in the area forming section, a partial function representative of a color conversion between coordinates in the area and coordinates of the second color space using a set of an arbitrary sample point provided in the first color space and a point in the second color space, which is associated with the sample point (Col. 3 lines 36-41); and

a whole function derivation section (Fig. 1 numeral 9) that combines the partial functions for the respective areas derived by the partial function derivation section to derive a whole function representative of the color conversion relation through the first color space in its entirety (Col. 3 lines 41-47)).

Regarding claim 5, Fuchigami discloses the color conversion relation derivation method according to claim 1, wherein each area formed by the area forming step is of equal size (Col. 11 lines 63-65).

Regarding claim 6, Fuchigami discloses the color conversion relation derivation method according to claim 1, wherein the area forming step separates the first color space into a plurality of sections (Col. 2 lines 45-49), wherein the plurality of areas are formed in the plurality of

sections (Col. 2 lines 49-53, dividing the already divided first areas. The first division reads on a plurality of sections with the second division reading on a plurality of areas).

Regarding claim 7, Fuchigami discloses a method of deriving a color conversion relation between a first color space and a second color space (see rejection of claim 1), comprising:

an area defining step that separates the first color space into a plurality of areas (see rejection of claim 1);

a partial function derivation step that derives, for each area defined by the area defining step, a partial function representative of a color conversion between the coordinates of the area of the first color space and corresponding coordinates of the second color space (see rejection of claim 1); and

a whole function derivation step that combines the partial functions of each said area to derive a whole function representative of the color conversion relation between the entire said first color space and the second color space (see rejection of claim 1).

Regarding claim 8, Fuchigami discloses the method of claim 7, wherein the areas defined by the area defining step are of equal size (see rejection of claim 5).

Regarding claim 9, Fuchigami discloses the method of claim 7, wherein the area defining step separates the first color space into a plurality of sections, wherein the plurality of sections are separated into the plurality of areas (see rejection of claim 6).

Regarding claim 10, Fuchigami discloses the method of claim 7, wherein the whole function derivation step combines the partial functions of areas which are adjacent to each other in the first color space (see rejection of claim 2).

Regarding claim 11, Fuchigami discloses the method of claim 10, wherein the adjacent areas are overlapping (see rejection of claim 2).

Regarding claim 12, Fuchigami discloses the apparatus of claim 3, wherein the partial function derivation section comprises determining a weighted function of the set of arbitrary sample points to a point overlapping each of the plurality of areas (Col. 3 lines 13-19).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchigami in view of well known prior art.

Regarding claim 4, Fuchigami discloses a color conversion relation derivation apparatus comprising the sections as rejected in claim 3 above.

Fuchigami fails to disclose or suggest a program storage medium storing a color conversion relation derivation program which causes a computer to operate as a color conversion relation derivation apparatus when the color conversion relation derivation program is incorporated into the computer and is executed.

However, it is clear from the disclosure of the reference that the processing method as rejected in claim 1 is carried out by the color conversion relation derivation processing apparatus as rejected in claim 3. It is well known in the image processing arts that a computer implemented method performed by an apparatus must receive "instructions" from a program residing on a computer readable program storage medium in order for the apparatus to be operational. (Official Notice)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a program storage medium storing a color conversion relation derivation program which causes a computer to operate as a color conversion relation derivation apparatus when executed, in the invention disclosed by Fuchigami, to make the apparatus disclosed in the reference operational.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchigami in view of Adobe Postscript Technical Note # 5124)

Regarding claim 13, Fuchigami discloses the apparatus of claim 3, wherein the set of arbitrary sample points comprise lattice points, as measured from color patches (Col. 8 lines 14-

24; The color patches output by the printer used to convert colors from the CMY color space to the input scanner RGB color space formed on the sheet of paper).

Fuchigami fails to disclose or suggest the lattice points are points of an independent color space.

Adobe Postscript (Technical note # 5124) teaches using a standard set of tristimulus values (X, Y, and Z) as values of an independent color space to relate one device dependent color space to another for conversion (Pg. 12 ¶ 6 lines 1-7 and ¶ 7 lines 1-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the color conversion derivation apparatus as disclosed by Fuchigami wherein an area forming section, partial function derivation section, and whole function derivation section are incorporated therein for converting lattice points measured from patches to utilize the teachings of Adobe Postscript wherein a device independent color space is used to relate device dependent color spaces with one another because the device independent color space introduces a color system much like what the average human perceives.

Response to Arguments

7. Applicant's arguments, see response to non-final rejection, filed September 28, 2007, with respect to the rejection(s) of claim(s) 1-3 under U.S.C. § 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Takahiro Fuchigami et al (US 6657746 B1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamaris Washington whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jamaris Washington
Junior Examiner
Art Unit 2625

KING Y. POON
SUPERVISORY PATENT EXAMINER

JW
December 7, 2007